
Antibiotic prophylaxis in dental treatments – expected endocarditis prophylaxis**Staedt H. ¹, Kämmerer P. W. ²**¹Private university in the Principality of Liechtenstein, Triesen, Liechtenstein²Department of Oral and Maxillofacial Surgery, Plastic Surgery, University Medical Centre Mainz, Mainz, Germany.

Introduction: Basically, the term prophylaxis implies, that the chosen antibiotic is given before the start of the dental treatment or dental surgery. The aim of perioperative antibiotic prophylaxis is to prevent or reduce the risk of superficial and deep postoperative wound infections or other postoperative infectious complications (e. g. sepsis). Before starting a dental treatment especially a surgical in riskpatients dental treatment; Mouthwash with 0.2% chlorhexidine solution should be carried out for 30 seconds to reduce the number of bacteria and it is of course obligate that all dental plaque is removed through a professional dental cleaning. While the rules for endocarditis prophylaxis are very precisely defined the other indications have to be weighed up in each case. [1,2,3]

Patients with joint prostheses: Before the implantation of joint prostheses, a dental examination and remediation of possible sources of infection (Mouthwash with 0.2% chlorhexidine and professional dental cleaning) should always be carried out in order to prevent bacterial colonization of the foreign material introduced. Also if the endoprosthesis has healed and there are no other risk factors (e. g. diabetes mellitus, immunosuppression, smoking etc.), the routine use of antibiotics in dental treatments is controversial and should be carefully considered. [5,6]

Implantation and bone augmentation: Several studies have shown that dentists routinely use antibiotics for prophylaxis on dental implants. There is a moderate level evidence to suggest that preoperative prophylactic antibiotics reduce the risk of implant loss by up to 2%. Patients who smoked appear to be at greater risk of infection. Therefore, prophylactic antibiotic use is probably not required for single implant placement in low-risk patients. In the case of bone augmentation with autologous bone, studies have shown that systemic antibiotic administration is indicated as a preoperative single dose to avoid postoperative infections. If bone alloplasti or xenogenic materials are used for augmentation, prophylaxis is recommended. [3,7,8]

Diabetes: The individual risk of each patient should be estimated on the basis of general risk factors (age, smoking, overweight, severity of the disease, current HbA1c value) depending on the severity of the intervention. Before extensive dental surgery, it is important Mouthwash with 0.2% chlorhexidine and professional dental cleaning before the treatment. Also here the routine use of antibiotics in dental treatments for patients with diabetes patients is not indicated. [9,10]

Bisphosphonates: Antibiotic prophylaxis is not necessary for nonsurgical dental treatments. If dental surgical interventions are necessary, antibioticprophylaxis is required. The therapy is carried out for three days or until the corresponding inflammatory, clinical changes have subsided. The operations them selves should be carried out as atraumatically as possible. The plastic covering of the exposed bone must be carried out. Also here before starting the treatment Mouthwash with 0.2% chlorhexidine and professional dental cleaning is obligate.[11,12]

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Conclusions: Antibiotics often do not lead to an improved outcome and are not always necessary. The range of indications is becoming increasingly narrower. Dentists must base their decision to prescribe antibiotics on evidence-based studies and thus achieve the goal of optimally treating their patients without losing sight of the development of resistance. Very important in any dental treatment in so called risk patients is Mouthwash with 0.2% chlorhexidine for 30s and professional dental cleaning.

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